



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/594,995	06/14/2000	Masaki Katayama	P/2171-185	7919
32172	7590	10/19/2005	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP 1177 AVENUE OF THE AMERICAS (6TH AVENUE) 41 ST FL. NEW YORK, NY 10036-2714			FAULK, DEVONA E	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 10/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/594,995

Applicant(s)

KATAYAMA ET AL.

Examiner

Devona E. Faulk

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 May 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15-17 and 19 is/are rejected.
- 7) ☒ Claim(s) 18 and 20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 14 June 0200 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 3/16/2005 with respect to the rejection(s) of claim(s) 8, 10, 13, 15 and 16 under 103(a) have been fully considered and are persuasive.

Therefore, the rejections have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Sekine and Takeda.

2. Claims 1-14 have been cancelled and claims 17-20 have been added.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claim 15** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 15 recites "a sending unit for sending DSP parameter data ..." but does not indicate where that data is sent.

5. **Claim 19** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 17 recites "a first memory". There is no first memory recited in claims 15-17. A memory is only recited.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. **Claims 15 and 17** are rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (Figures 11 and 12, page 1, line 14-page 4, line 3) in view of Sekine et al. (EP 0 563 929) in further view of Takeda et al. (JP 07-015395).

Regarding claim 15, the applicant's admitted prior art discloses an audio system (Figures 11 and 12) comprising:

a virtual speaker position operating part (rom, figures 11 and 12; page 3, lines 14-20);

a sending unit for sending dsp parameter data (the applicant's admitted prior art teaches of the dsp being under control of the cpu (page 3, lines 3-4). as such, the cpu obviously has to send data to the dsp.

a memory for storing the dsp parameter (rom, page 3, lines 21-22) data;

audio signal terminals corresponding to sound sources, where audio signals from the sound sources are input through the audio signal terminals (figure 11, t1-t4);

a selector (sl, figure 11) for selecting a sound source from among the sound sources;

a sound field processor for sound field processing the sound signal from the selected sound source using one of the dsp parameter data corresponding to the sampling frequency of the sound source selected by the selector (dsp, page 3, lines 3-8 and lines 17-20);

an output terminal, the audio signal processed by the sound field processor being output through the output terminal (ts, figures 11 and 12; page 3, lines 17-20).

The prior art however fails to disclose but Sekine teaches of an adjustable positional of a virtual speaker being given through the virtual speaker position operation part (coefficient memory, 32; column 20, lines 32-42), of DSP data that includes data defining the adjustable position of the virtual speaker given through the virtual speaker operation part (column 20, lines 12-25 and 32-42).

The applicant's admitted prior art in view of Sekine fails to disclose but Takeda teaches that of DSP parameter data that is prepared for each of sampling frequencies (paragraphs 0012-0014 under DETAILED DESCRIPTION section) and of a memory for storing the DSP parameter data being sent from a sending unit (conversion circuit, 8; paragraph 0018 under EXAMPLE section). It would have been obvious to modify the applicant's admitted prior art as modified by Sekine to have data that is sent to the DSP being DSP parameter data as taught by Takeda in order handle plural sampling frequencies in a digital signal processing system (see PURPOSE on abstract page).

All elements of **claim 17** are comprehended by the rejection of claim 15.

Art Unit: 2644

8. **Claim 16** is rejected under 35 U.S.C. 103(a) as being unpatentable over the applicant's admitted prior art (Figures 11 and 12, page 1, line 14-page 4, line 3) in view of Sekine et al. (EP 0 563 929) in view of Takeda et al. (JP 07-015395) in further view of Scofield et al. (U.S. Patent 5,459,790).

Regarding **Claim 16**, the applicant's admitted prior art as modified by Sekine and Takeda fails to disclose but Scofield teaches wherein the DSP parameter includes constituent of a head relation transfer function for a right ear, constituent of a head relation transfer function for a left ear and constituent representing difference between both ears with respect to time of arrival of an identical sound at both ears (Scofield teaches the concept of a DSP parameter including constituents of a head related transfer function for a right and left ear and a constituent representing difference between both ears as claimed (column 3, lines 2-31). Thus it would have been obvious to one of ordinary skill in the art at the time of the invention to use Scofield's concept of a DSP parameter as claimed for the benefit of giving the user the ability to apply direction dependent equalization.

Claim Objections

9. **Claims 18 and 20** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Devona E. Faulk whose telephone number is 571-272-7515. The examiner can normally be reached on 8 am - 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian Chin can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DEF


VIVIAN CHIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600